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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,898	11/26/2003	Michael Conrad	07781.0118-00000	6296
22852	7590	05/05/2006		EXAMINER
				LIN, SHEW FEN
			ART UNIT	PAPER NUMBER
			2166	

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/721,898	CONRAD ET AL.
	Examiner	Art Unit
	Shew-Fen Lin	2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 26 November 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-8 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 05/21/2004

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

**Detail Action**

- a. This action is responsive to communications: application filed on 11/26/2003.
- b. Claims 1-8 are pending in this Office Action. Claims 1 and 5 are independent claims.

***Priority***

Applicant's claim for the benefit of a prior-filed application 60/429374, filed on 11/27/2002 under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

***Information Disclosure Statement***

The information disclosure statement (IDS) received on 5/21/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the Information Disclosure Statement is being considered by the Examiner.

***Double Patenting***

Claims 1-2 of this application conflict with claims 1-2 of Application No. 10/721,426. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-2 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of copending Application No. **10/721,426**. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they use the same limitations.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following table shows the claims in Instant Application that are rejected by corresponding claim(s) in **10/721,426**.

Application 10/721,426	Instant Application
1. A method of avoiding data loss in a data object replication process, comprising:  creating an electronic data element comprising a first field having an identifier and a second field having a state of the identifier; setting the	1. A method of replicating data objects from a source system to a target system, comprising:  creating an electronic data element comprising a first field having an identifier and a second field having a state of the identifier, wherein

Application 10/721,426	Instant Application
<p>second field of the data element to a state indicating that the electronic data element may be accessed and assigned; assigning the identifier to one or more data objects; setting a shared lock on the electronic data element; storing the one or more data objects; and upon a commit of the storing of the one or more data objects, removing the shared lock and setting the state of the identifier to indicate that the one or more data objects may be replicated.</p> <p>2. The method of claim 1, wherein the state of the identifier may be set to: a) a first state, in which said electronic data element may be accessed by one or more data object processing operations and whereby said identifier is assignable to one or more data objects, b) a second state, in which said electronic data element may not be accessed by one or more data object processing operations and whereby said identifier is assignable to one or more data objects, or c) a third state, in which said electronic data element may not be accessed by one or more data object processing operations and whereby said identifier is not assignable to one or more data objects.</p>	<p>the state of the identifier may be set to: a) a first state, in which said electronic data element may be accessed by one or more data object processing operations and whereby said identifier is assignable to one or more data objects, b) a second state, in which said electronic data element may not be accessed by one or more data object processing operations and whereby said identifier is assignable to one or more data objects, or c) a third state, in which said electronic data element may not be accessed by one or more data object processing operations and whereby said identifier is not assignable to one or more data objects; assigning the identifier to one or more data objects; assigning a state to the identifier; and replicating the one or more assigned data objects from the source system to the target system if the state of the identifier is the third state.</p> <p>2. The method of claim 1, further comprising storing the one or more assigned data objects prior to replicating the one or more assigned data objects.</p>

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Jamil et al. (US Patent Application Publication US 2003/0233523, hereinafter referred as Jamil).

**As to claims 1 and 5**, Jamil discloses a system with methods /means / system of replicating data objects from a source system to a target system [figure 6 shows copying data object 646 from a source system (processor 604) to a target system (processor 608); But if processor 202 has modified data portion 218, then a data request should be sent from shared storage 290, to private storage 220 for an updated copy of data portion 218, with which to satisfy the data request of processor 201 (paragraph 0034)], comprising:

creating an electronic data element [figure 4, 490; figure 7, 790; figure 9a~9d, 990 all show the data element comprising Data, Status and P fields], comprising a first field having an identifier [figure 4, 490; figure 7, 790; figure 9a~9d, 990 all show the data element comprising Data, Status and P fields; the Data field is the corresponding identifier field] and a second field having a state of the identifier [figure 4, 490; figure 7, 790; figure 9a~9d, 990 all show the data element comprising Data, Status and P fields; the Status field is the corresponding state of the identifier], wherein the state of the identifier may be set to:

a) a first state [the shared state, S], in which said electronic data element may be accessed by one or more data object processing operations [according to the M (modified), E (exclusives), S (shared) and I (invalid) protocol for maintaining coherency (paragraph 0032)] and whereby said identifier is assignable to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment],

b) a second state [the exclusive dirty (ED) state], in which said electronic data element may not be accessed by one or more data object processing operations [paragraphs 0035-0040] and whereby said identifier is assignable to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment], or

c) a third state [the modified (M) state], in which said electronic data element may not be accessed by one or more data object processing operations [paragraphs 0035-0040] and whereby said identifier is not assignable to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment];

assigning the identifier to one or more data objects [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment];

assigning a state to the identifier [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment]; and

replicating the one or more assigned data objects from the source system to the target system if the state of the identifier is the third state [figure 6 shows that, when the status changes from ED to M, data object 646 is copied from a source system (processor 604) to a target system (processor 608); But if processor 202 has modified data portion 218, then a data request should be sent from shared storage 290, to private storage 220 for an updated copy of data portion 218, with which to satisfy the data request of processor 201 (paragraph 0034)].

**As to claims 2 and 6,** Jamil discloses comprising storing the one or more assigned data objects prior to replicating the one or more assigned data objects [modified copy 646 is received

by shared storage 690, data portion 697 is updated and reassigned a status of M (paragraph 0054)].

**As to claims 3 and 7**, Jamil discloses comprising setting the state of the second field of the electronic data element to the second state [figure 4, 490; figure 7, 790; figure 9a~9d, 990 show the assignment].

**As to claims 4 and 8**, Jamil discloses comprising, upon a commit of the storing of the one or more data objects, the state of the second field of the electronic data element is set to the third state [modified copy 646 is received by shared storage 690, data portion 697 is updated and reassigned a status of M (the modified state, i.e. third state, (paragraph 0054)]

#### *Related Prior Arts*

The following list of prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Holenstein, Bruce D. et al., US 20020133507 A1, “Collision avoidance in database replication systems”, (...Tokens are used to prepare a target database for replication from a source database and to confirm the preparation).
- Kozina, Gerald Edward, US 20020174200 A1, “Method and system for object replication in a content management system”, (...Replication is provided by utilizing the library server to track the objects to be replicated within the system).

- Demers; Alan et al., US 5870761 A, “Parallel queue propagation”, (...The plurality of streams are used in parallel to propagate changes made at the source site to the destination site. A record of transactions that made changes that need to be propagated from the source site to the destination site is maintained at the source site).
- Mosher, Jr.; Malcolm, US 5884328 A, “System and method for synchronizing a large database and its replica”, (...a method of synchronizing a backup database with a corresponding primary database while one or more application programs continue to perform transactions that modify the primary database).
- Fukuda; Toshihiko et al., US 5890153 A, “Database lock control method”, (...provide a lock control method for a database system in which a representation of lockable data is performed by making the logical lock relationships among data and using the relationships, thereby reducing the overhead of lock control).
- Sorace; Jean-Dominique et al., US 6477597 B1, “Lock architecture for large scale system”, (...requesting a resource of the system takes control of said resource if a first lock state indicates that said resource is free. The requesting processor is placed on active standby if a second lock state indicates that said resource is busy).
- Bolik; Christian et al., US 6857053 B2, “Method, system, and program for backing up objects by creating groups of objects”, (...grouping backup objects stored in backup storage. A backup group is created and a plurality of backup

objects are added as members of the backup group in separate backup transactions).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shew-Fen Lin  
Patent Examiner

Art Unit 2166  
April 28, 2006



MOHAMMAD ALI  
PRIMARY EXAMINER